

**Claims**

1. A magnet arrangement for carrying, guiding and/or braking systems with magnetic levitation vehicles, comprising an electromagnet with a plurality of magnet poles having cores (3a to 3f) being arranged one behind the other in a longitudinal direction and being connected by pole  
5 backs (4) and having coils (5a to 5f) coiled onto said cores (3a to 3f), which coils are alternately connected inside and outside with a coil (5a to 5f) following in longitudinal direction, and means allocated to said coils (5a to 5f) for reduction of electromagnetic oscillations occurring in said coils, characterized in that at least selected pole backs (4) are configured as  
10 constituents of the means.
2. A magnet arrangement according to Claim 1, characterized in that the selected pole backs (4) for attenuation of the electrical oscillations are made of a material with high eddy current losses.  
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3. A magnet arrangement according to Claim 2, characterized in that all provided magnet backs (4) are selected ones and are made of a material with high eddy current losses.
- 20 4. A magnet arrangement according to any of the preceding claims 1 to 3, characterized in that the selected pole backs (4) are wrapped with a short-circuit winding (30).
5. A magnet arrangement according to Claim 4, characterized in that all  
25 provided pole backs (4) are selected ones and wrapped with a short-circuit winding (30).
6. A magnet arrangement according to any of the preceding claims 1 to 5, characterized in that the selected pole backs (4a, 4b, 4c) are wrapped with  
30 compensation coils (34) for compensation of electrical currents generated in said coils (5a to 5f), particularly in case of resonance, and that said

compensation coils (34) are conductively connected with each other.

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7. A magnet arrangement according to Claim 6, characterized in that those pole backs (4a, 4b, 4c) are selected pole backs which connect the cores of two coils externally connected to each other (5a, 5b, 5c, 5d, 5e, 5f).
8. A magnet arrangement according to claim 6 to 7, characterized in that the compensation coils (34) are connected with each other via transformers (35) switched in between.
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9. A magnet arrangement according to any of the preceding claims 6 to 8, characterized in that the selected pole backs (4a, 4b, 4c) are comprised of a sheet metal packet made of individual metal sheets.